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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,160	01/20/2004	Darren Shakib	305335.01	3220

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EXAMINER	
RAYYAN, SUSAN F	

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/761,160	SHAKIB ET AL.	
	Examiner	Art Unit	
	Susan F. Rayyan	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *04052004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-27 are pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on April 5, 2004 was filed before First Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 13-25,27 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Number 6,070,158 issued to Steven T. Kirsch et al ("Kirsch").

As per claim 1 Kirsch anticipates:

an infrequent word identifier that identifies infrequent words that occur in less than a threshold number of documents (see column 2, lines 25-32, 47-53) ;

a frequent word index that maps the location of documents that contain words that occur in more than the threshold number of documents (column 10, lines 30-35, 40-45, stop list and part of record);

an infrequent word index, maintained separately from the frequent word index, that maps the location of documents that contain infrequent words (column 2, lines 45-54 and column 6, lines 64-67);

an index scanning component that, in response to a query containing an infrequent word, scans the infrequent word index to find the location of documents containing the infrequent word (column 2, lines 27-30,47-50).

Kirsch teaches an infrequent word identifier that identifies infrequent words that occur in less than a threshold number of documents, a frequent word index that maps the location of documents that contain words that occur in more than the threshold number of documents, an infrequent word index, maintained separately from the frequent word index, that maps the location of documents that contain infrequent words; an index scanning component that, in response to a query containing an infrequent word, scans the infrequent word index to find the location of documents containing the infrequent word (columns 2,10).

As per claim 2, same as claim arguments above and Kirsch anticipates:

wherein the frequent word index is stored by document (column 10, lines 40-45).

As per claim 3, same as claim arguments above and Kirsch anticipates:

wherein the frequent word index is partitioned by document (column 10, lines 40-45).

As per claim 4, same as claim arguments above and Kirsch anticipates:

wherein the frequent word index is distributed across multiple computing systems(column 6, lines 64-66).

As per claim 5, same as claim arguments above and Kirsch anticipates:

wherein the infrequent word index is stored by document(column 6, lines 33-38).

As per claim 6, same as claim arguments above and Kirsch anticipates:

wherein the infrequent word index is partitioned by document(column 6, lines 33-38).

As per claim 7, same as claim arguments above and Kirsch anticipates:

wherein the infrequent word index is distributed across multiple computing computer systems (column 6, lines 64-66).

As per claim 8, same as claim arguments above and Kirsch anticipates:

wherein the infrequent word index is stored by word (column 10, lines 20-26).

As per claim 9, same as claim arguments above and Kirsch anticipates:

wherein the infrequent word index is partitioned by word (column 10, lines 20-26).

As per claim 10, same as claim arguments above and Kirsch anticipates:
wherein the infrequent word index is stored on a single computing computer system (column 6, lines 64-66).

As per claim 11, same as claim arguments above and anticipates:
wherein the index scanning component, in response to a user query containing an infrequent word, retrieves document locations for documents having the infrequent word from the infrequent word index (column 2, lines 27-30,47-50) and transmits the retrieved document locations to computer systems containing frequent word indexes for the retrieved documents (column5, lines 19-27).

As per claims 13,18 Kirsch anticipates:
scanning the set of documents and gathering infrequent words that occur a number of times that is less than a threshold amount(see column 2, lines 25-32, 47-53);
constructing an infrequent word index that maps infrequent words to locations of documents that contain the words(column 2, lines 45-54);
constructing a frequent word index, separately maintained from the infrequent word index, that maps frequent words that occur a number of times that is greater than the threshold amount to locations of documents that contain the words(column 10, lines 30-35, 40-45, stop list and part of record and column 6, lines 64-67);

and examining the terms in the user query to identify any terms are infrequent words; and searching the infrequent word index for the terms that are identified as infrequent words(column 2, lines 27-30,47-50).

Kirsch teaches scanning the set of documents and gathering infrequent words that occur a number of times that is less than a threshold amount, constructing an infrequent word index that maps infrequent words to locations of documents that contain the words, constructing a frequent word index, separately maintained from the infrequent word index, that maps frequent words that occur a number of times that is greater than the threshold amount to locations of documents that contain the words;
and examining the terms in the user query to identify any terms are infrequent words; and searching the infrequent word index for the terms that are identified as infrequent words (columns 2,10).

As per claim 14, same as claim arguments above and Kirsch anticipates:
comprising storing the infrequent word index in a dedicated computer system(column 6, lines 64-66).

As per claim 15, same as claim arguments above and Kirsch anticipates:
comprising storing the infrequent word index in dedicated partitions on computer systems that also store the frequent word index (column 6, lines 64-66).

As per claim 16, same as claim arguments above and Kirsch anticipates: comprising storing the infrequent index by word. (column 10, lines 20-26).

As per claim 17, same as claim arguments above and Kirsch anticipates: comprising storing the infrequent index by document(column 6, lines 33-38).

As per claim 19 Kirsch anticipates:

identifying infrequent words that occur in less than a threshold number of documents(see column 2, lines 25-32, 47-53);

mapping the location of documents that contain words that occur in more than the threshold number of documents in a frequent word index(column 10, lines 30-35, 40-45, stop list and part of record);

maintaining, separately from the frequent word index, an infrequent word index that maps the location of documents that contain infrequent words(column 2, lines 45-54 and column 6, lines 64-67);

in response to a query containing an infrequent word, scanning the infrequent word index to find the location of documents containing the infrequent word(column 2, lines 27-30,47-50).

Kirsch teaches identifying infrequent words that occur in less than a threshold number of documents, mapping the location of documents that contain words that occur in more than the threshold number of documents in a frequent word index,

maintaining, separately from the frequent word index, an infrequent word index that maps the location of documents that contain infrequent words, in response to a query containing an infrequent word, scanning the infrequent word index to find the location of documents containing the infrequent word(columns 2,10).

As per claim 20, same as claim arguments above and Kirsch anticipates:
wherein the infrequent word index is stored by document(column 6, lines 33-38).

As per claim 21, same as claim arguments above and Kirsch anticipates:
wherein the infrequent word index is partitioned by document(column 6, lines 33-38).

As per claim 22, same as claim arguments above and Kirsch anticipates:
wherein the infrequent word index is distributed across multiple computing computer systems(column 10, lines 20-26).

As per claim 23, same as claim arguments above and Kirsch anticipates:
wherein the infrequent word index is stored by word (column 10, lines 20-26).

As per claim 24, same as claim arguments above and Kirsch anticipates:
wherein the infrequent word index is partitioned by word (column 10, lines 20-26).

As per claim 25, same as claim arguments above and Kirsch anticipates:

wherein the infrequent word index is stored on a single computing computer system(column 6, lines 64-66).

As per claim 27 Kirsch anticipates:

means for scanning the set of documents and gathering infrequent words that occur a number of times that is less than a threshold amount; means for constructing an infrequent word index that maps infrequent words to locations of documents that contain the words(see column 2, lines 25-32, 47-53);

means for constructing a frequent word index, separately maintained from the infrequent word index, that maps frequent words that occur a number of times that is greater than the threshold amount to locations of documents that contain the words(column 10, lines 30-35, 40-45, stop list and part of record and column 6, lines 64-67);

and means for examining the terms in the user query to identify any terms are infrequent words and means for searching the infrequent word index for the terms that are identified as infrequent words (column 2, lines 27-30,45-54 and column 6, lines 64-67).

Kirsch teaches means for scanning the set of documents and gathering infrequent words that occur a number of times that is less than a threshold amount; means for constructing an infrequent word index that maps infrequent words to locations of documents that contain the words, means for constructing a frequent word index,

separately maintained from the infrequent word index, that maps frequent words that occur a number of times that is greater than the threshold amount to locations of documents that contain the words, and means for examining the terms in the user query to identify any terms are infrequent words; and means for searching the infrequent word index for the terms that are identified as infrequent words (columns 2,10).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 12, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 6,070,158 issued to Steven T. Kirsch et al ("Kirsch") in view of US Patent Application Publication Number 2002/0032772 issued to Bjorn Olstad ("Olstad").

As per claim 12, same as claim arguments above and Kirsch does not explicitly teach including an index cache. Olstad does teach a index cache (paragraph 85, lines 1-4) to improve relevancy in search services (paragraph 18). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kirsch with an index cache improve relevancy in search services (paragraph 18).

As per claim 26, same as claim arguments above and Kirsch does not explicitly teach including an index cache. Olstad does teach a index cache (paragraph 85, lines 1-4) to improve relevancy in search services (paragraph 18). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kirsch with an index cache to improve relevancy in search services (paragraph 18).

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Rayyan whose telephone number is (571) 272-1675. The examiner can normally be reached M-F: 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Susan Rayyan

June 23, 2006

JOHN R. COTTINGHAM
PRIMARY EXAMINER